AMENDMENTS TO CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A line driver, comprising:

a differential amplifier having an inverting output terminal, a non-inverting output terminal, an inverting input terminal, and a non-inverting input terminal;

a first resistor coupled to the inverting input terminal;

a second resistor coupled to the non-inverting input terminal; and

a resistive feedback network, having a plurality of resistors in symmetric configuration to couple to the inverting output terminal, the non-inverting output terminal, the inverting input terminal, and the non-inverting input terminal to form a feedback network.

2. (Original) The line driver of claim 1, wherein the resistive feedback network further includes a third resistor, a fourth resistor, a fifth resistor, a sixth resistor, a first match resistor, and a second match resistor, wherein a first terminal of the third resistor is coupled to the non-inverting output terminal and a first terminal of the first match resistor, a second terminal of the third resistor is coupled to the inverting input terminal and a first terminal of the sixth resistor, a first terminal of the fourth resistor is coupled to the inverting output terminal and a first terminal of the second match resistor, a second terminal of the fourth resistor is coupled to the non-inverting input terminal and a first terminal of the fifth resistor, a second terminal of the fifth resistor is coupled to a second terminal of the first match resistor, and a second terminal of the sixth resistor is coupled to a second terminal of the second match resistor.

3. (Original) The line driver of claim 2, wherein the resistive feedback network further includes further comprising:

a seventh resistor and an eighth resistor, wherein a first terminal of the seventh resistor is coupled to the inverting input terminal, a second terminal of the seventh resistor is coupled to the second terminal of the fifth resistor, a first terminal of the eighth resistor is coupled to the non-inverting input terminal, and a second terminal of the eighth resistor is coupled to the second terminal of the sixth resistor.

4. (Original) The line driver of claim 2, further comprising:

a ninth resistor and a tenth resistor, wherein a first terminal of the ninth resistor is coupled to the non-inverting input terminal, a second terminal of the ninth resistor is coupled to the first terminal of the third resistor, a first terminal of the tenth resistor is coupled to the inverting input terminal, and a second terminal of the tenth resistor is coupled to the first terminal of the fourth resistor.

5. (Currently Amended) A line driver, comprising:

a differential amplifier having an inverting output terminal, a non-inverting output terminal, an inverting input terminal, and a non-inverting input terminal;

a first input resistor ~~unit~~ coupled to the inverting input terminal;

a second input resistor coupled to the non-inverting input terminal;

a first impedance matching resistor ~~unit~~ coupled to the non-inverting output terminal;

a second impedance matching resistor coupled to the non-inverting output terminal; and

a resistive feedback network, having a plurality of resistors in symmetric configuration, wherein the resistive feedback network further includes:

a ~~second~~ first resistor unit ~~coupled~~ including a first resistor connected to the first impedance matching resistor ~~unit~~ and the inverting input terminal; and a second resistor connected to the second impedance matching resistor and the non-inverting input terminal;

a ~~third~~ second resistor unit ~~coupled~~ including a third resistor connected to the non-inverting output terminal and the inverting input terminal; and a fourth resistor ~~unit coupled to the impedance matching resistor unit and the inverting input terminal; and a fifth resistor unit coupled~~ connected to the inverting output terminal and the ~~inverting~~ non-inverting input terminal;

wherein each of the first resistor unit, the second resistor unit, the third resistor unit, the fourth resistor unit, the fifth resistor unit, and the impedance matching resistor unit includes a plurality of resistors in symmetric configuration

a third resistor unit including a fifth resistor connected to the second impedance matching resistor unit and the inverting input terminal and a sixth resistor connected to the first impedance matching resistor unit and the non-inverting input terminal; and

a fourth resistor unit including a seventh resistor connected to the inverting output terminal and the inverting input terminal and a eighth resistor connected to the non-inverting output terminal and the non-inverting input terminal.

6. (Currently Amended) A line driver, comprising:

a differential amplifier having an inverting output terminal, a non-inverting output terminal, an inverting input terminal, and a non-inverting input terminal;

a first input resistor ~~unit~~ coupled to the inverting input terminal;

a second input resistor coupled to the non-inverting input terminal;

a first impedance matching resistor ~~unit~~ coupled to the non-inverting output terminal;

a second impedance matching resistor coupled to the non-inverting output terminal; and

a resistive feedback network, having a plurality of resistors in symmetric configuration, wherein the resistive feedback network further includes only three of the following four resistor units[[:]] comprising:

a ~~second~~ first resistor unit ~~coupled to the impedance matching~~ including a first resistor ~~unit and the inverting input terminal~~;

~~a third resistor unit coupled~~ connected to the ~~non-impedance~~ first impedance matching resistor and the inverting output input terminal and the inverting input terminal;

a ~~fourth~~ second resistor ~~unit coupled~~ connected to the second impedance matching resistor ~~unit~~ and the ~~inverting~~ non-inverting input terminal; ~~and~~

a ~~fifth~~ second resistor unit ~~coupled~~ including a third resistor connected to the non-inverting output terminal and the inverting input terminal[[;]]

~~wherein each of~~ and a fourth resistor connected to the ~~first resistor unit, the second resistor unit, the third resistor unit, the fourth resistor unit, the fifth resistor unit, and the impedance matching resistor unit includes a plurality of resistors in symmetric configuration~~ inverting output terminal and the non-inverting input terminal;

a third resistor unit including a fifth resistor connected to the second impedance matching resistor unit and the inverting input terminal and a sixth resistor connected to the first impedance matching resistor unit and the non-inverting input terminal; and

a fourth resistor unit including a seventh resistor connected to the inverting output terminal and the inverting input terminal and a eighth resistor connected to the non-inverting output terminal and the non-inverting input terminal.

7. (Currently Amended) A line driver, comprising:

a differential amplifier having an inverting output terminal, a non-inverting output terminal, an inverting input terminal, and a non-inverting input terminal;

a first input resistor ~~unit~~ coupled to the inverting input terminal;

a second input resistor coupled to the non-inverting input terminal;

a first impedance matching resistor ~~unit~~ coupled to the non-inverting output terminal;

a second impedance matching resistor coupled to the non-inverting output terminal; and

a resistive feedback network, having a plurality of resistors in symmetric configuration, wherein the resistive feedback network further includes ~~only two of the following resistor units~~:

a ~~second~~ first resistor unit ~~coupled~~ including a first resistor connected to the first impedance matching resistor ~~unit~~ and the inverting input terminal; and a second resistor connected to the second impedance matching resistor and the non-inverting input terminal, and one of the following three resistor units comprising:

a second resistor unit including a third resistor ~~unit coupled~~ connected to the non-inverting ~~output terminal and the inverting input terminal;~~

~~a fourth resistor unit coupled to the impedance matching resistor unit and the inverting input terminal; and~~

~~a fifth resistor unit coupled to the inverting~~ output terminal and the inverting input terminal[[;]]

~~wherein each of~~ and a fourth resistor connected to the ~~first resistor unit,~~ inverting output terminal and the ~~second resistor unit, the third resistor unit, the fourth resistor unit, the fifth resistor unit, and the impedance matching resistor unit includes a plurality of resistors in symmetric configuration~~ non-inverting input terminal;

a third resistor unit including a fifth resistor connected to the second impedance matching resistor unit and the inverting input terminal and a sixth resistor connected to the first impedance matching resistor unit and the non-inverting input terminal; and

a fourth resistor unit including a seventh resistor connected to the inverting output terminal and the inverting input terminal and a eighth resistor connected to the non-inverting output terminal and the non-inverting input terminal.

8. (New) A line driver, comprising:

a differential amplifier having an inverting output terminal, a non-inverting output terminal, an inverting input terminal, and a non-inverting input terminal;

a first input resistor coupled to the inverting input terminal;

a second input resistor coupled to the non-inverting input terminal;

a first impedance matching resistor coupled to the non-inverting output terminal;

a second impedance matching resistor coupled to the non-inverting output terminal; and

a resistive feedback network, having a plurality of resistors in symmetric configuration, wherein the resistive feedback network further includes:

a first resistor unit including a first resistor connected to the non-inverting output terminal and the inverting input terminal and a second resistor connected to the inverting output terminal and the non-inverting input terminal; and

a second resistor unit including a third resistor connected to the inverting output terminal and the inverting input terminal and a fourth resistor connected to the non-inverting output terminal and the non-inverting input terminal.